

# MIDWEST FLYER

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The State of Minnesota provides this Technical Bulletin in the interest of Aviation Safety and to Promote Aeronautical Progress in the State and Nation.

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## Changes At Aeronautics

*by Cassandra Isackson*

*Director, Minnesota DOT Office of Aeronautics*

Every day I learn more about aviation, and the impact our MnDOT Aeronautics office has on air transportation for Minnesotans. Although I still feel “new” at the office, it has already been more than five years since I became the Aeronautics Director – and in that time, more than half of our staff is new. While we miss those who have retired, or gone on to new challenges, we still have great people doing amazing things. We continue to work hard for aviation safety, aviators, and airports in Minnesota.



Cassandra Isackson

Check out our website at: <http://www.dot.state.mn.us/aero/programs.html> for a list of many functions we support. Two of the areas where I notice the biggest changes are in our Navigation Systems work, and the rapidly changing area of drone flight.

If you belong to an organization interested in supporting Minnesota aviation, please remember to invite any of our specialists to speak to your group about a topic of interest. The contact list is printed here; you too may be surprised at how many new names there are. The list might be worth posting at your airport next to the MN/DOT weather machine:

- Adopt-An-Airport - Darlene Dahlseide - 651-234-7248
- Adopt-A-School - Darlene Dahlseide - 651-234-7248
- Aeronautical Chart - Darlene Dahlseide - 651-234-7248
- Aeronautical News and Tech Bulletin - Dan McDowell - 651-234-7182
- Air Service Marketing - Kevin Carlson - 651-234-7191
- Air Transportation - Scheduling (shuttle schedule - Internal MnDOT employees only) - Sheila Kvilvang - Linda Connor - 651-234-7222
- Aircraft Registration - Sandra Martinez - Jana Thompson - 651-234-7204
- Airport Directory - Kelly Akhund - 651-234-7234
- Airport Electrical and Lighting Systems - John Schroeder - 651-234-7251
- Airport Improvement Program (AIP) - Dan Boerner - 651-234-7244

- Airport Inspections - 5010 Program - Kelly Akhund - 651-234-7234
- Airport Layout Plan (ALP) - Kevin Carlson - 651-234-7191
- Airport Licenses - Kelly Akhund - 651-234-7234
- Airport Maintenance - Dan Boerner - 651-234-7244
- Airport Land Use Zoning - Ryan Gaug - 651-234-7236
- Aviation Education and Resources - Darlene Dahlseide - 651-234-7248
- Aviation Maintenance Technician's Conference - Darlene Dahlseide - 651-234-7248
- Aviation Planning - Ryan Gaug - 651-234-7191
- Capital Improvement Program (CIP) - Dan Boerner - 651-234-7244
- Commercial Operations - Leanne Gaiovnik - 651-234-7232
- Enforcement - Rules and Regulations - Rick Braunig - 651-234-7230
- Fly MN Airports! - Darlene Dahlseide - 651-234-7182
- Funding and Grants - Dan Boerner - 651-234-7244 - Matt Lebens - 651-234-7243
- Geographic Information Systems (GIS) - Rick Braunig - 651-234-7230
- Hangar Loan Program - Brian Conklin - 651-234-7241
- Heliports - Rick Braunig - 651-234-7230
- Maintenance and Operation (M and O) - Jenny Bahneman - 651-234-7240
- Navigation Aids General - Michael Hartell - 651-234-7225
- Pavement Management - Dan Boerner - 651-234-7244
- Pavement Marking and Striping - Kelly Akhund - 651-234-7251
- Promotional Programs and Activities - Darlene Dahlseide - 651-234-7182
- Seaplane Seminar - Jeff Flynn - 651-234-7235
- Small Tower Registry - Darlene Dahlseide - 651-234-7248
- Tall Towers - Darlene Dahlseide - 651-234-7248
- Unmanned Aircraft Systems (UAS) or Drones - Tony Fernando - 651-234-7227
- Weather Dissemination (MN/WAS) - Michael Hartell - 651-234-7125
- Weather Observation System (AWOS) - Michael Hartell - 651-234-7225
- Windsock Replacement - Leanne Gaiovnik - 651-234-7232



## It's Not That Far Away

**W**ith winter nearly upon us, it's the time of the year when those who continue to fly begin to wonder how they will find the runway under low visibility conditions. What if you have a little help in finding the runway and then landing precisely and consistently, even in the low visibility conditions? Would you want that help?

Soon, this help will come via an onboard "autoland" system, or a combination of an autoland system and a very skilled pair of hands and eyes. Imagine how great it would be to have an autoland system in your GA aircraft!

Well that dream is not that far away. The German federal government's project called the "C2Land Program," in a collaboration with Technical University of Munich and Technische Universität Braunschweig, has developed the technology for an autoland capable GA aircraft. The system utilizes GPS in part to guide the aircraft to the GA airport runway and it can do so in low-visibility conditions.

The only problem with that is the supplied GPS coordinates aren't always exact and thus are not reliable to put an aircraft down and centered on the proper runway. It would then require the pilot to take manual control before touch down if the system was running only via GPS. But by adding some additional technology and combining that input data

with the GPS data, the system is able to accurately guide the GA aircraft to a safe landing.

The additional technology includes both a visible-light and an infrared camera. Image processing software analyzes the cameras' video and is able to accurately display the aircraft's position relative to the runway, as the aircraft approaches the runway. It combines the visual data with the GPS data and is then able to provide the autopilot with more precise data, thus leading the aircraft to a safe landing, even in low visibility situations.

The system was installed on a Diamond DA42 Twin Star, which was flown successfully to a perfect landing. Thomas Wimmer, the test pilot for the project said, "The cameras already recognize the runway at a great distance from the airport." He added, "The system then guides the aircraft through the landing approach on a completely automatic basis and lands it precisely on the runway's centerline."

So, take heart GA pilots. Someday soon, you too may have an autoland system added to your aircraft to aid you in executing better landings. It is simply a matter of time before the system is operational, and that future is not that far away.

Source: Technical University of Munich.

<https://newatlas.com/auto-landing-system-small-airports/60443/>



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## Applications For Minnesota Aviation Hall of Fame Scholarships Now Being Accepted!

**T**he Minnesota Aviation Hall of Fame (MAHF) wishes to remind the aviation community that the deadline for applying for its 2020 aviation scholarships is December 31, 2019.

This past spring, the Minnesota Aviation Hall of Fame presented four scholarships valued at \$1,500.00 each at its annual banquet in April. All of the information for applying for these scholarships can be found on the MAHF website: [www.mnaviationhalloffame.org](http://www.mnaviationhalloffame.org). Once on the website, click SCHOLARSHIPS.

One application is all that is necessary to qualify for all four scholarships. Recipients will be notified by the end of January 2020, and the scholarships will be presented at the MAHF annual induction banquet in April 2020.

The four scholarships include the Minnesota Aviation Hall of Fame Scholarship, which is funded by numerous anonymous Hall of Fame donors; the Hinz Family Red Tail Scholarship, which is sponsored by the family of the late Donald E. Hinz, who lost his life while flying the P-51C Red Tail Mustang at the Red Wing, Minnesota airshow in 2004; the Dahlberg Family Scholarship in honor of 1997 Minnesota Aviation Hall of Fame inductee and World War II ace, Kenneth Dahlberg; and the Brig. Gen. George Schulstad Scholarship, named after the Vietnam veteran and combat

pilot.

The scholarships will be awarded to individuals who meet at least one of the following criteria:

1. Expresses a desire to advance their flight training, however they must possess at least a private pilot certificate.
2. Wishes to advance their aviation career.
3. Wishes to make a career change into aviation.
4. Currently enrolled in a post-secondary aviation-related program (i.e. college aviation program, flight training, aviation technical school, flight dispatcher school). Please note that it would be helpful if the applicant for this scholarship has logged flight-time, but it is not a requirement.

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The purpose of the Minnesota Aviation Hall of Fame is to establish and maintain an ongoing means of honoring native Minnesotans, who have contributed in a significant manner to the development, advancement and promotion of aviation in the state, or elsewhere; or to honor individuals who were not native to Minnesota, but who enhanced the aviation climate in Minnesota in their careers.

For additional information, email or call Patrick Halligan at [flyinghooligan@gmail.com](mailto:flyinghooligan@gmail.com) (651-341-9264).

